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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,193	01/31/2002	Steven Teig	SPLX.P0112	9411

23349 7590 07/09/2003

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EXAMINER

KIK, PHALLAKA

ART UNIT PAPER NUMBER

2825

DATE MAILED: 07/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/062,193

Applicant(s)

TEIG ET AL.

Examiner

Phallaka Kik

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification or in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

Claim Objections

2. **Claims 1-11** are objected to because of the following informalities:

As per **claim 1**, "sub problem" (lines 2, 3, 5, 7) should be --sub-problem-- for greater clarification.

As per **claims 2,3,10**, "characteristic comprises" (line 2) should be --characteristics comprise-- for proper antecedent basis and for proper grammar since the "characteristics" recited in claim 1 is plural.

As per **claims 4,5**, "sub problem" (line 1) should be --sub-problem-- for greater clarification.

As per **claims 6-8**, "parameters" (line 2) should be --measurements-- for proper antecedent basis.

As per **claims 2-11**, the claims are also objected to for incorporating the above errors into the respective claims by claim dependency.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1,3,5,9,11** are rejected under 35 U.S.C. 102(b) as being anticipated by **Brandt et al.** ("Circuit multi-fault diagnosis and prediction error estimation using a committee of Bayesian neural networks", IEE Colloquium on Testing Mixed Signal Circuits and Systems, 23 October 1997, pp. 7/1-7/7).

As per **claims 1,9**, the physical parameters identified and extracted including a set of physical measurements are described on page 7/1, last two paragraphs to page 7/2, first two paragraphs, wherein the training cases with which the Bayesian inference is apply is further described on page 7/2, paragraph 3 to page 7/4, paragraph 4.

As per **claims 3,5,11**, the characteristics be resistances are described on page 7/4, wire and neural network are illustrating in Fig. 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 2,4,6-8,10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Brandt et al.** ("Circuit multi-fault diagnosis and prediction error estimation using a committee of Bayesian neural networks", IEE Colloquium on Testing Mixed Signal Circuits and Systems, 23 October 1997, pp. 7/1-7/7) in view of **Niu et al.**, ("A Bayesian approach to variable screening for modeling the IC fabrication process", 1995 IEEE International Symposium on Circuits and Systems, Vol. 2, 30 April 1995, pp. 1227-1230).

As per **claims 2,4,6-8,10**, **Brandt et al.** disclose all of the elements of claim 1 which the claims depend respectively. However, **Brandt et al.** failed to teach specifically the electrical characteristics estimation includes capacitance and delay or the sub-problem comprising a section of interconnect wire and nearby interconnect wiring within a define halo, and/or the physical measurements being spacing, wire width, and wire length. **Niu et al.** teach to adapt the Bayesian approach using the variable screening for modeling the IC fabrication so that the physical parameters and measurements are taken into account for the particular desired electrical characteristics to estimate or model (see page 1227). It would have been obvious to one ordinary skilled in the art at the time of the invention to further incorporate the variable screening of **Niu et al.** into the system/method of **Brandt et al.** so that the various physical parameters (i.e., spacing, wire width, and wire length, a section of interconnect wire and nearby interconnect wiring within a define halo) are taken into account for the particular

desired electrical characteristics to estimate or model, while making such calculation efficient and practical as taught by **Niu et al.** (page 1227, paragraph 3).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Therefore, Applicant is requested to consider them carefully in response to this Office Action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phallaka Kik whose telephone number is 703-306-3039. The examiner can normally be reached on Flexitime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 703-308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Any response to this action should be mailed to:

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

703-872-9318 (for Before-Final) and 703-872-9319 (for After-Final) for formal communications intended for entry,

Or:

(703) 746-4111 (for informal or draft communications, please label "PROPOSED" or "DRAFT" and let the examiner know prior to faxing)

Hand-delivered responses should be brought to Crystal Plaza 4, 2201 South Clark Place, Arlington, VA 22202, Fourth Floor (Receptionist).

9. Applicant should note that effective May 1, 2003, the United States Patent and Trademark Office has a new Commissioner for Patents address for transitioning to the new Office location in Alexandria, VA, wherein correspondence in patent-related matters to organizations reporting to the Commissioner for Patents must now be addressed to:

**Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**


**VUTHE SIEK
PRIMARY EXAMINER**

PK 
June 29, 2003